

# VIRGINIA DEPARTMENT OF EDUCATION

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## Planning Grant Application for a College Partnership Laboratory School

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### A. GENERAL INFORMATION

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1. **Name of Eligible Entity (Planning Grant Applicant):** Virginia State University
2. **Authorized Official Representative:** Makola Abdullah, Ph.D., President, Virginia State University
3. **Name of Contact Person for Application:** Willis Walter, Ph.D., Dean, College of Education, Virginia State University
4. **Telephone:** 850-339-1605
5. **Email:** wwalter@vsu.edu
6. **Office Telephone Number:**
7. **Date of Submission:** Resubmitted with revisions on November 17, 2022
8. **Amount of Funding Requested (\$200,000 maximum):** \$199,834
9. Public institutions of higher education (IHE); public higher education centers, institutes, or authorities; or eligible institutions of higher education as defined in the Tuition Assistance Grant Program, as provided in [§ 23.1-628](#), (eligible entity or entities) may apply for a Virginia Board of Education (Board) College Partnership Laboratory School Planning Grant (Planning Grant).
10. Each Planning Grant Applicant (applicant) seeking a Planning Grant must read and comply with the Instructions for Application for a Planning Grant for a College Partnership Laboratory School (Lab School), which are available on the Virginia Department of Education's (Department) website, and fully complete this Planning Grant Application (application) to be eligible for a Planning Grant.

11. Applications may be submitted, and will be evaluated for Planning Grant awards based on factors set forth herein, on a rolling basis.
- 12. Planning Grant Term: This application is for a one-time Planning Grant, the term for which will not exceed 12 months from the date of any award hereunder.**
13. The completed PDF version of the application and related materials must be sent to [labschools@doe.virginia.gov](mailto:labschools@doe.virginia.gov) by email. The Department may return or reject proposals that are incomplete.
14. Please contact [labschools@doe.virginia.gov](mailto:labschools@doe.virginia.gov) by email if there are any questions about the application process.

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## B. DEFINITIONS

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1. **College Partnership Laboratory School:** In accordance with [Item 4-14](#) of the General Assembly's 2022-2024 Biennium budget, the Code of Virginia § [22.1-349.1](#) is amended and reenacted, and the types of IHE eligible entities to establish Lab Schools are defined as follows:
  - a. "College Partnership Laboratory School" means a public, nonsectarian, nonreligious school in the Commonwealth established by a public institution of higher education; public higher education center, institute, or authority; or an eligible institution, as defined in § [23.1-628](#).  
Notwithstanding the provisions of § [22.1-349.5](#), a public institution of higher education; a public higher education center, institute, or authority; or an eligible institution, as defined in § [23.1-628](#) may submit an application for formation of a college partnership laboratory school."
  - b. An "eligible institution" as provided above is an institution of higher education as defined in the Tuition Assistance Grant Program in accordance with § [23.1-628](#).

2. **At-risk student:** As provided in the Code of Virginia § [22.1-349.1](#), "at-risk student" means a student having a physical, emotional, intellectual, socioeconomic, or cultural risk factor, as defined in Board criteria, that research indicates may negatively influence educational success.

For the purpose of these guidelines and any Planning Grant awards, "at-risk students" include (a) students who have experienced learning loss as the result of the COVID-19 pandemic; (b) students served by low-performing schools that are designated as "accredited with conditions" or "accreditation denied" based on the Virginia Board of Education's accreditation ratings; and (c) students attending schools identified under the Every Student Succeeds Act within three support categories: (i) Comprehensive Support and Improvement, (ii) Targeted Support and Improvement, or (iii) Additional Targeted Support Category.

3. **Regional diversity:** For the purpose of evaluation of this application, regional diversity reflects representation from each of the Department's eight Superintendent [regions](#).

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## C. ASSURANCES AND SIGNATURES

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### 1. **ASSURANCES**

- a. By signing and submitting this application, the applicant assures that it will adhere to state and federal laws and regulations governing public schools, including the *Virginia Standards of Quality*, the *Virginia Standards of Learning*, and the Board's *Regulations Establishing Standards for Accrediting Public Schools in Virginia*.
- b. The applicant assures that all elements of the proposed school(s) will comport with all applicable state and federal laws and regulations.
- c. The applicant certifies that to the best of his/her knowledge the information in the application is correct, that all application elements have been addressed as required in this application, and that the applicant understands and will comply with the assurances.
- d. The applicant agrees to conduct a review of their planning phase, and submit milestones and deliverables as required, including, but not limited to, a comprehensive report with details for the projected Lab School implementation, expenses, and other items as may be prescribed by the Department.
- e. Applicants receiving a Planning Grant are expected, by the end of the term of such grant, to submit a subsequent application for the launch of a Lab School to the Department, for review and approval by the Board.

- f. Applicant provides assurance to subscribe to the following reporting requirements timetable:

TIMELINE	BENCHMARK AND DELIVERABLES
On or before the end of the first quarter of the grant term	Awardee must present a proposed list of milestones, measures of success, and deliverables.
On or before the end of the second quarter of the grant term	Awardee must submit a progress report in order to be eligible for the second installment of the award.
On or before the end of the third quarter of the grant term	Awardee must present progress on milestones and deliverables, including submission to the Board of an application for approval to launch a Lab School.
On or before the end of the grant term	Awardee is expected to have attained approval by the Board to launch a Lab School.

## 2. **SIGNATURES**

- a. Higher Education Authorization:

Signature of [AUTHORIZED REPRESENTATIVE of public institution of higher education; public higher education center, institute, or authority; or an eligible institution]:

Printed Name: Makola M. Abdullah, Ph.D.  
Title: President, Virginia State University  
Date: November 17, 2022

- b. Fiscal Agent Authorization (if applicable):

Signature of Division Superintendent of Fiscal Agent School Division: N/A

Printed Name:  
Title:  
Date:

c. Signature of Chairman of School Board of Fiscal Agent: N/A

Printed Name:

Title:

Date:

## **D. REGIONAL AND APPLICANT DIVERSITY**

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1. Planning Grants will be awarded in a manner that encourages ready access to Lab School options and the establishment of Lab Schools in each of the Department's [eight Superintendent regions](#).
2. Indicate Proposed Name(s) of Lab School:  
**Virginia State University S.T.E.M. Laboratory School**
3. Identify Proposed Physical Location(s) of Lab School:  
816 E. Bank Street, Petersburg, Virginia 23803; and  
20811 2<sup>nd</sup> Avenue, Petersburg Virginia 23803

## **E. PROGRAM DESCRIPTION, GOAL, AND TIMELINE**

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### **1. PROGRAM DESCRIPTION**

- a. General description of the program (*2-3 paragraphs maximum*):

The Virginia State University S.T.E.M. Lab School, in partnership with Petersburg Public Schools, will refine the existing grades 6-12 curriculum to provide a high-quality educational program. Curriculum work at the secondary level will focus on 6th grade through 12th grade students, incorporating social-emotional skill-building, computational thinking, and computer science skills. Thematic and interdisciplinary approaches to incorporating STEM initiatives and computational thinking into English, math, science, arts and music curriculum seek to instill curiosity and engagement, allowing students to be creative in authentic learning environments, have larger opportunities to enroll in advanced coursework such as advanced placement and dual enrollment, and explore college and career opportunities through networking, industry partnerships, internships, and credentialing.

This planning project will also include teacher learning opportunities in the curriculum writing and implementation process, provide supports and mentoring for the national board certification process as well as instructors wishing to pursue additional licensure endorsements, and develop understanding of innovative STEM integration across the curriculum while incorporating universal design for learning (UDL) into their teaching.

In order to assist in preparing middle school students for these initiatives, school-readiness activities, aligned with the Virginia Standards of Learning, will provide a defined focus for PreK-5 students, integrating STEM programming to prepare

students for their educational experiences. As defined on the Virginia Department of Education website, the lab school planning project will also bring together children, families, schools, communities, and community organizations, all of whom have an essential role in developing school readiness. Educational programming will also be aligned with the requirements and outcomes of the Virginia Kindergarten Readiness Program (VKRP).

b. Rationale for the program (2-3 paragraphs maximum):

This project creates a research-practitioner partnership between Petersburg Public Schools and Virginia State University focusing primarily on Petersburg Public Schools for grades 6 - 12. This partnership also includes a number of industry partners, community organizations, and school division staff to provide a wide scope of wraparound services to support students and families. School division partners collaborating on the PreK-5 experience as consultants will include Chesterfield County Public Schools, Prince George County Public Schools, and Dinwiddie County Public Schools.

Currently, Petersburg City Public Schools has one fully accredited school: Petersburg High School. The middle school and four elementary schools are all accredited with conditions. The currently available Reading performance data (2021-2022) indicates that for Reading, the overall student performance pass rate in Petersburg was at 46%, compared with an average of 73% at the state level. The table below outlines pass rates in Reading for Petersburg as compared to the state.

Table 1. Reading Performance, 2021-2022

Grade	Petersburg Pass %	State Pass %	Difference
All Students	46%	73%	-28%
3	38%	68%	-30%
4	42%	72%	-30%
5	47%	72%	-25%
6	38%	70%	-32%
7	45%	72%	-27%
8	47%	72%	-25%
EOC	72%	85%	-13%

- c. Nature of innovation proposed for the program, including how it will improve student academic proficiency, mastery, college and career readiness, and long-term outcome goal (2-3 paragraphs maximum):

The goal of the Virginia State University Laboratory School will be to provide an innovative, inclusive, and high caliber instructional program with an equitable learning foundation for children's future academic and professional successes. The partnership directly engages families of young children with post-secondary educators for developmental intervention and advocacy of early education. The program will create a workgroup to research, review and suggest early language and literacy curriculums, as well as developmental screening, assessment and progress monitoring tools to collect the center's learning performance data. The workgroup will create a growing list of quality home learning and language resources to provide families with increased access to school readiness materials.

The proposed planning project also aims to improve student academic outcomes by working with instructional staff, school leaders, and other partners, to develop an aligned curriculum to support learners of all backgrounds and abilities identified through research and in-service experiences, and to identify tools and supports for self-assessment by teachers and students. In addition, a September 2018 news article noted that Petersburg teachers and administrators agreed technology had played a major role in the successful move towards full school accreditation at the time (CBS 6 News, Sept. 28, 2018). Being thoughtful of providing the most advanced technological tools and training to students, staff, and the community, VSU seeks to leverage its resources, in collaboration with regional school division and higher education partners and industry leaders, to develop a sustainable regional STEM Education Center with the goal of building and supporting its community of educators, researchers, students, and families, and translating research into best practice with the collective goal of strengthening the PreK-20 STEM pipeline.

- d. Expected student learning benefits (2-3 paragraphs maximum):

STEM-based education can teach students more than just math and science. STEM provides opportunities for authentic, hands-on learning in a real-world or service oriented work environment and deeper learning opportunities. Skills attained through STEM-based educational opportunities meet Virginia's 5 C's for a future-ready graduate: critical thinking skills, collaboration skills, communication skills, creative thinking skills, and citizenship skills. Providing students with these opportunities, connecting with community-based agencies and industry leaders, allows them to work within and across their local, national or global community. Expected student learning benefits include improvement in the percentage of students mastering the Virginia Standards of Learning in all areas (based on Bloom's Taxonomy's 6 Levels of Learning):

- Contextualization of **knowledge** - development of capabilities over competencies through teamwork and collaboration
- Students will 'learn how to learn' by expanding their creative thinking and potential for innovation through **comprehension**
- **Application** of learning to solve a problem, enhancing students' problem-solving skills
- Ability to effectively **analyze** to solve problems, building resiliency and self-efficacy
- Ability to **synthesize** to form new, innovative and **creative** solutions
- **Evaluate** the value or quality of ideas based on established criteria

Cline (2022) noted that pass percentage rates in science in Virginia, in particular, had the worst drop from pre-pandemic pass rates. Petersburg City Public Schools' pass percentage in science went from 46.7% in 2018-2019 to only 32.83% in 2021-2022, a difference of -13.87%. Cline quoted Superintendent Balow as stating that "more intensity and higher frequency intervention will undoubtedly make a difference for students who read..below grade level" (Cline, 2022, para. 38). This science achievement data, in combination with the Reading achievement data outlined in Table 1, demonstrate the urgent need to pool resources to assist Petersburg City Public Schools in creating new and innovative ways to increase student literacy through evidence-based instruction and interventions. In order to improve student learning outcomes in all areas, not only will professional learning need to occur for in-service teachers, but this planning grant process will focus on aligning evidence-based literacy instruction practices for aspiring teachers in teacher education programs at Virginia State University, and its collaborating partners, Richard Bland and Brightpoint.

Student learning outcomes developed as part of this planning project, will also be inclusive of social emotional learning (SEL) competencies as recommended by CASEL (2017). For students at the middle and high school levels, SEL components will also be integrated, in addition to opportunities to gain workforce skills, experience, and credentialing will occur through planning for career exploration through job shadowing, internships, service learning, summer camps, makerspaces, advanced coursework such as advanced placement and dual enrollment coursework, and/or credentialing.

e. Expected teacher learning and professional development benefits (2-3 paragraphs maximum):

Virginia State University, and its higher education partners, Richard Bland College of William and Mary and Brightpoint Community College, will develop a teacher learning and professional development model that is threefold: preservice teacher preparation, inservice teacher development, and supports for teachers to obtain licensure to teach computer science and to earn national board certification. Preservice teacher preparation will focus on computer science/STEM initiatives and training, regardless of the preservice teacher's academic focus (e.g. elementary education). Preservice



teachers will also be engaged in networking and training with community and local industry partners to better understand the impact of CS/STEM in the classroom, and be introduced to cutting edge technology that can be utilized in the classroom.

In-service teacher training will follow best practices learned in STEM and computer science lab schools, and supported by CodeVA, to foster interdisciplinary and thematic collaboration across grade levels and schools. These collaborations will be inclusive of the arts, music, and physical education. In Petersburg Public Schools, instructional staff and leaders will collectively reimagine curriculum, aligned with the Virginia Standards of Learning and Computer Science Standards of Learning, to provide students with engaging and authentic learning opportunities that are high-quality. The innovative curriculum will focus on Virginia's 5 C's: critical thinking, collaboration, communication, creative thinking, and citizenship, which grant students connections to real-world business or service-oriented work environments.

Finally, the project will also support teachers who are interested in pursuing additional licensure in technology and computer science (or other content areas) by providing educational resources, mentoring, planning and research support, and network sharing collaboratively provided by the Virginia NBCT Network, VSU, Richard Bland, Brightpoint Community College, and CodeVA. Coding and other CS skills development will also be provided for in-service and pre-service teachers through VSU's current Innovative Teaching Degree for K-6 educators. The Virginia NBCT Network will also provide support for in-service teachers interested in pursuing professional growth opportunities through the National Board Certification process.

f. Content areas addressed:

This lab school planning proposal will focus on multiple content areas related to the PreK curriculum, K-5 curriculum, and 6-12 curriculum. As outlined in the 2022 Virginia Literacy Act (VLA), the overarching goal of this planning project is to develop and implement innovative curriculum to improve early literacy outcomes for Virginia's young learners. The PreK workgroup that will make recommendations for the new, innovative curriculum to ensure that upon entering Kindergarten, core literacy instruction based in scientifically based reading research and evidence based literacy instruction is implemented for all learners. In alignment with the VLA goals, the PreK workgroup (and Petersburg City Public Schools) will ensure that families will have access to online resources to support literacy development at home. Wraparound services to support the PreK - 5 literacy initiative will be supported by the leadership in Petersburg, Chesterfield, Dinwiddie, and Prince George school divisions, VSU, Richard Bland, and Brightpoint, and partnering community agencies such as Communities in Schools of Petersburg, Boys & Girls Club of Metro Richmond, Urban League, and the YMCA.

In addition to setting literacy education goals and initiatives, a focus will be placed on mathematics and science (STEM) initiatives in grades K-5, then scaled up for grades

6-12 to include computer science and computational thinking skill building. A partnership between VSU and the National Math + Science Initiative will support teachers and school leaders through professional learning opportunities to support learners in early mathematics and science instruction and interventions. For grades K-5, curricular emphasis will integrate literacy skill building with early introduction to computational thinking (such as scratch) to build mathematics literacy. The lab school planning project will bring together teachers, school leaders and specialists, research specialists, and support programs and services to develop a curriculum model that supports not only the school division and students' educational goals, but to also increase their ability to self-regulate through social-emotional learning.

Workgroups focusing on the grade 6-12 experience will begin by identifying the skill sets needed by graduates to successfully move into the workforce or continue with postsecondary education opportunities. By doing this, the secondary education workgroup can then work backwards to identify literacy, math, and science skills needed at each grade level, back to the 6th grade. The early educational initiatives that will be reviewed and potentially implemented at the middle school grades will include computational thinking and computer science instruction such as introduction to cloud computing. As students move into the high school grades, the curriculum will begin to focus on developing additional computer science skills, integrated throughout the curriculum (English, social studies, math, art, music, etc.), building students' confidence and abilities for critical problem solving, and culminating in creating additional dual enrollment and advanced placement coursework opportunities, as well as internships and badging/credentials.

## **2. GOAL**

State the overall proposed goal for the program:

The goal of the Virginia State University Laboratory School will be to provide an innovative, inclusive, and high caliber instructional program for PreK-12 students in the partner divisions of Petersburg, Chesterfield, Prince George, and Dinwiddie. This initiative will focus on the integration of STEM initiatives to improve student academic achievement and interest, strengthen postsecondary opportunities, thereby creating lifelong learners.

## **3. TIMELINE**

Provide a timeline of the planning process, including the proposed date/school year for launch of a Lab School:

The proposed timeline will begin upon notification of funding award. VSU and its educational, community, and business partners have already been meeting weekly since August to outline outcomes and further refine elements for the lab school planning project. Part of this initial scope of work has focused on the development of proposed workgroups that would begin immediately following a funding award. These workgroups

are largely self-selected and will be guided by VSU faculty to facilitate discussions and document each workgroup's planning and identified objectives, activities, and outcomes during the planning process. Each workgroup will also identify recommended budgets, culminating in the development of a lab school implementation grant application. A proposed timeline, ending in March 2023 can be found in Table 2. It is Virginia State's goal to complete planning grant activities in a timely manner, and to collect data from the 8 workgroups to further develop the lab school implementation grant application. The 8 workgroups will include: Preschool/Early Childhood Education, Reimagining the K-5 Curriculum, Reimagining the 6-12 Curriculum, Non-Profit Organizations, Higher Education Planning, Business Partners, Professional Development, and Facilities Planning.

Table 2. Proposed Timeline for Lab School Planning Grant, September 2022 - March/April 2023

Milestones/Deliverables	Sept. 2022	Oct. 2022	Nov. 2022	Dec. 2022	Jan. 2023	Feb. 2023	March 2023	March 2023 or End of Planning Grant Period
Partnership for Petersburg Planning Committee Meetings								
Submission of Planning Grant Application								
Identification of Workgroup Participants								
Workgroups meet monthly*; submit reports of actions								
VSU, Higher Education, and School Leadership Teams meet								
VSU Administrative Planning Team meets								
Provide progress reports to Board of Education								
Develop Implementation and Initial Start-Up Grant Applications								
Collect Letters of Support for Implementation and Start-up Applications								
Submission of Implementation and Initial Start-Up Grant Applications								
<i>*Timeline is dependent on funding notification</i>								

## F. STUDENT POPULATION AND RELEVANT RESEARCH

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### 1. TARGETED STUDENT POPULATION

- a. Describe the student population and discuss why they are proposed.  
Include the number of students, reporting group(s), and grade level(s):

Proposed targeted student population is centered in Superintendent's Region I.

**Petersburg City Public Schools** currently serves 4,257 students, of whom 74% are considered economically disadvantaged. The student population is 87.7% Black, 7.6% Hispanic, 2.4% White, 0.6% Two or more races, 0.4% Asian, 0.2% Native Hawaiian, and 0.1% Native American. Eleven percent of students have identified disabilities and 4.5% are English language learners. As of 2022, 88% of students graduated in four years. For the 2021-2022 school year, the Fall Membership by Grade was 324 students for PreK, 1,911 for grades K-5, 917 for grades 6-8, and 1,944 for grades 9 -12. For the Class of 2022, 63.7% of students earned a standard or other diploma (39.2% for the State), 21.9% received an advanced diploma (52.9% for the State), 10.1% received a GED, Certificate, or was an other non-graduate (2.7% for the State), and 4.2% were considered Dropouts (5.2% for the State). Students with disabilities were more likely to obtain a standard or other diploma (64.4%), or to be a dropout (5.2%). In 2021-2022, only 7 Petersburg students (0.68%) were enrolled in dual enrollment, 21 (2.04%) were enrolled in an Advanced Placement course, and 73 (7.11%) were enrolled in Governor's School. For the 2021-2022 school year, only the high school was fully accredited. The middle school and all elementary schools were accredited with conditions.

Petersburg City Public Schools is proposed as a partner for this lab school planning project because of their close proximity to Virginia State University, and the opportunity to collaboratively partner with Petersburg, Richard Bland, Brightpoint Community College, and numerous other community and industry partners to create innovative initiatives to improve student achievement, create additional pathways for college and career opportunities, and provide opportunities for dual enrollment access and internships.

At the PreKindergarten level, VSU will add Chesterfield County Public Schools, Dinwiddie County Public Schools, and Prince George County Public Schools to the planning process to plan for and implement a regional PreK program. Descriptions of these school divisions are below. It is intended by this planning project to develop a full implementation grant proposal that will serve students in grades PreK-12.

**Chesterfield County Public Schools** has an overall student enrollment of 62,500 for the 2021-2022 school year. Of these, 910 were PreK students. The demographics of Chesterfield County Public Schools for 2021-2022 were 45.5% White, 26.2% Black, 19.5% Hispanic, 5.3% Multiple Races, 3.3% Asian, and 0.2% Native Hawaiian. Students with disabilities were 13% of the population, while 34% were considered to be economically disadvantaged. All Chesterfield schools were fully accredited for the

2021-2022 school year with the exception of one middle and one high school which were both accredited with conditions.

**Dinwiddie County Public Schools** had an enrollment of 4,189 students in the 2021-2022 school year. Eighty five of those students were enrolled in a PreK program. White students made up 53.1% of the student population, 32.5% were Black, 7.5% Hispanic, 6.3% Multiple Races, 0.4% Asian, and 0.1% Native American. Thirteen percent of the students were identified as receiving support services for a disability, and 77.2% of students were economically disadvantaged. All schools in Dinwiddie were fully accredited for the 2021-2022 school year.

**Prince George County Public Schools** boasted a 2020-2021 On-Time Graduation Rate of 91.06%, with 387 graduates. In the 2021-2022 school year, PGPS had 6,141 total students in grades PreK-12, with 139 students in PreK. They report a demographic of 47.1% White students, 29.6% Black, 13.9% Hispanic, 7.3% Multiple Races, 1.2% Asian, 0.7% Native Hawaiian, and 0.3% Native American. Thirteen percent of all students were identified as receiving support services for a disability, with 49.1% of all students as economically disadvantaged. All schools in Prince George were fully accredited for the 2021-2022 school year.

GRADES TO BE SERVED FOR THE FULL TERM OF THE APPROVED LAB SCHOOL CONTRACT (PLEASE CHECK ALL THAT APPLY*)			
Pre-K	✓	Sixth Grade	✓
Kindergarten	✓	Seventh Grade	✓
First Grade	✓	Eighth Grade	✓
Second Grade	✓	Ninth Grade	✓
Third Grade	✓	Tenth Grade	✓
Fourth Grade	✓	Eleventh Grade	✓
Fifth Grade	✓	Twelfth Grade	✓

\*If the applicant intends to add or change grade levels at some point during the Lab School's operation, please provide this information in the education program section of the narrative.

b. Describe the community(ies) the school(s) serves:

As of the 2020 census, the population for the **City of Petersburg, VA** was 33,458. Demographics for the City of Petersburg were reported as 73.32% Black, 15.48% White, 5.89% Hispanic, and 3.36% Multiple Races. The city spans a total area of 23.2

square miles and is located 21 miles south of Richmond. Petersburg is also a part of the Tri-Cities regional economy known as the "Appomattox Basin", which includes a portion of southeastern Chesterfield County. On August 22, 2022, the City of Petersburg and The Commonwealth of Virginia partnered to form "Partnership for Petersburg", whose mission is to improve education, public safety, health, and transportation issues. The City of Petersburg is served by three institutions of higher education: Brightpoint Community College, Richard Bland College of William and Mary, and Virginia State University.

**Chesterfield County, VA** has a population of 364,548, according to the 2020 Census, making it the fourth-most populated county in Virginia. The county's demographics are reported as 57.9% White, 22.4% Black, 11.04% Hispanic, 4.31% Multiple Races, and 3.59% Asian. About 3.30% of families and 4.50% of the population were considered to be below the poverty line, including 5.60% of those under age 18 and 3.40% of those age 65 or over. Chesterfield County is considered part of the "Greater Richmond Region".

**Dinwiddie County, VA** is located 25 miles south of Richmond, covering approximately 504 square miles, and considered to be both suburban and rural. The 2020 Census stated the population of Dinwiddie County to be 27,947. Of those, 62.07% were White, 29.04% were Black, 4.04% were Hispanic, and 3.73% were Multiple Races. About 6.60% of families and 9.30% of the population were below the poverty line, including 11.60% of those under age 18 and 12.60% of those age 65 or over.

Located 25 miles southeast of Richmond, **Prince George County, VA** is home to Fort Lee, a military installation whose history dates back to 1917. The base continues to provide administrative and logistical support to the United States Army and currently stands as the third largest training center in the Army. Children living on post are served by the county's school division. As of the 2020 census, the population of Prince George County was 43,010: 52.69% White, 29.51% Black, 10.1% Hispanic, and 4.50% Multiple Races. About 6.50% of families and 8.00% of the population were considered to be below the poverty line, including 11.40% of those under the age of 18 and 8.30% of those age 65 or over.

**Petersburg, Dinwiddie, and Prince George** are considered to be part of Virginia's Gateway Region. VGR is a private, nonprofit economic development organization that markets the Tri-Cities of Colonial Heights, Hopewell and Petersburg and the surrounding counties of Dinwiddie, Prince George, Surry and Sussex. VGR fosters regional prosperity through business growth, powerful partnerships and delivering innovative resources to its communities, and focuses its efforts on new and existing business investment and job creation.

- c. If the Lab School is going to have a specialized focus (e.g., Science, Technology, Engineering, Mathematics [STEM], at-risk students, special



education, career and technical education, gifted education, classical education, etc.), please describe the focus:

The Lab School will include a specialized STEM focus, integrated into the curriculum across all grade levels. The focus of the instructional program will be to introduce STEM topics to inspire students to learn about the community and world around them, opportunities that are available to them and how to best prepare for those opportunities, advocate for equity in STEM education and career access, and celebrate the contributions of students, teachers, their school, families, and community in STEM. In all grade levels, STEM will be infused through interdisciplinary integration (organizing key concepts and skills linking to a specific content) and thematic integration (making connections across multiple disciplines related to a defined topic). These integrations will culminate in transdisciplinary integration where students demonstrate application of their learning to real world contexts. Implementing these three components follows the pathways of universal design for learning (UDL). UDL focuses on the WHY of learning through engagement, the WHAT of learning through representation, and the HOW of learning through action and expression (CAST, n.d.).

The Lab School Plan will eventually incorporate multiple innovative channels that stimulate career exploration and pursuit from elementary through high school. One of these proposed channels to be reviewed is the middle school-focused GO TEC STEM lab model (Great Opportunities in Technology and Engineering Careers), which can be operational within 12 months. GO-TEC's design exposes and encourages students to pursue four-year, 2-year, and direct-to-work STEM career path opportunities fully consistent with the Lab School Concept and with Petersburg Public Schools leadership. As the Lab School Plan develops and matures, additional modules can be integrated to incorporate more career paths and grade levels. The partnership of VSU, CCAM (Commonwealth Center for Advanced Manufacturing), and Brightpoint Community College has already been selected by GO Virginia as the Regional Coordinating Entity for GO TEC, giving Petersburg access to multiple, committed support resources both locally and across the Commonwealth. The industry-driven nature of the GO TEC modules will ensure that the local economy will connect with and ultimately employ Petersburg students.

## **2. RELEVANT RESEARCH**

Discuss any relevant research tied to the proposed student population and overall goal of the program to demonstrate that it will improve student academic proficiency, mastery, college and career readiness, and long-term outcomes:

Increasing student learning, engagement and achievement is a continued focus of teachers from pre-K to post-secondary education. There is an abundance of historical evidence that social, psychological and cultural factors greatly influence students' motivation and ability to learn (Kim & Conrad, 2006; Palmer & Gasman, 2008). Student performance and achievement, especially in STEM areas, are related to motivational beliefs (e.g., self-efficacy) and availability of positive racial/ethnic role models (Cokley,



2003; Harris & Marsh, 2010). Negative attitudes can be changed by exposing elementary students of either gender to positive experiences in science (Harty, Beall & Scharmann, 1985).

*Expanding Underrepresented Minority Participation*, a publication developed jointly by the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine, maintains that by the time they reach kindergarten, students have already developed the necessary “habits of mind” to be successful in STEM areas (National Academy of Sciences, 2011). The study suggests that the breakdown in confidence and interest in STEM subjects occurs long before the average student sets foot in a university classroom. For minority students in particular, the problem is amplified:

Even if students are prepared, have adequate information, and are ambitious and talented enough to succeed in STEM fields, success may also hinge on the extent to which students feel socially and intellectually integrated into their academic program (National Academy of Science, 2011, p.245).

It is critical, therefore, to not only familiarize underrepresented students with the sciences and impart pertinent information, but also to root out false impressions of STEM subjects as foreign entities. In an elementary school workforce wherein the typical science teacher is female, white, and over the age of 40 (Fulp, 2002), it is easy for minority students to feel isolated. Upon reaching the university setting, where much of the freshman curriculum is intended to “weed out” would-be Science and Engineering majors, the student who is unsure or uncomfortable will quickly slip through the cracks. Early intervention is needed to break a broadening cycle of scientific illiteracy and lack of motivation; therefore, programs intended to tackle the widening achievement gap for minorities must focus not only on aspiring scientists and engineers, but also on preservice K-6 teachers whose enthusiasm toward the sciences can be funneled into future generations.

Research has shown that the most important school-based factors for improving student outcomes and turning around struggling schools are teacher quality and school leadership (The Education Reform Act, 2015). For nearly two decades increased emphasis has been placed on the need for colleges and universities to significantly improve and demonstrate more accountability regarding the quality of pre-service preparation programs for all aspiring teachers. The need for programs to significantly enhance teacher candidates' clinical experiences is of paramount concern.

Additionally, the need for ensuring an adequate supply of skilled, highly effective teachers who are committed to work in high needs school divisions with diverse student populations continues to be acute. To help address these issues, members of the national, state and local P-20 education communities, including parents, researchers, politicians, private entrepreneurs, the U. S. Department of Education (USDOE), and the public have been engaged in exploring and implementing a variety of new and revised

strategies. It is VSU's mission to not only engage with its local public school divisions to support all students in the region, but to recruit and train highly effective teachers, thereby providing opportunities for students and families never before imagined.

## **G. COLLABORATION AND STAKEHOLDER INVOLVEMENT**

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1. Describe the involvement of local school divisions, community-based organizations, employers, teachers, and parents in the planning, development, and implementation of the proposed program:

Virginia State University's main partner for the lab school planning grant is Petersburg City Public Schools. In addition to Petersburg, VSU will partner with Chesterfield County Public Schools, Dinwiddie County Public Schools, and Prince George County Public Schools to develop an innovative, regional Pre-K program serving all Petersburg 3 and 4 year olds, and those from other divisions who do not qualify for federal or state assistance in their own divisions. As part of the planning process, VSU has already been meeting on a weekly basis with community-based organizations, potential employers, higher education organizations, and other non-profit educational organizations such as CodeVA.

2. If the Lab School is going to be in partnership with a local school division(s), please describe the partnership briefly:

This lab school project will be implemented in partnership with Petersburg City Public Schools, with full support from the Petersburg School Board and the City of Petersburg.

## **H. SUSTAINABILITY**

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1. The goal of the Planning Grant program is to support public institutions of higher education; public higher education centers, institutes, or authorities; or eligible institutions of higher education as defined in the Tuition Assistance Grant Program, as defined in [§ 23.1-628](#), as they develop and implement programs in order to create or improve capacity to operate and sustain a Lab School independently of long-term state funding, and in a manner that promotes quality, innovation, and program results.
2. Please describe the capacity of your public institution of higher education; public higher education center, institute, or authority; or eligible institution to implement a Lab School:

Virginia State University (VSU), America's first fully state supported four-year institution of higher learning for Blacks, is a comprehensive university and one of two land-grant

institutions in the Commonwealth of Virginia. VSU is an 1890 land-grant university offering its students education in the fields of agriculture, engineering, family and consumer sciences, and the military sciences. Its land-grant mission also drives the university to be a leader in agricultural research and in extending its university expertise beyond its campus walls to help improve the quality of life in our state, the nation and world. Its mission is to promote and sustain academic programs that integrate instruction, research, and public service in a design most responsive to the needs of those individuals within its scope of influence.

Virginia State is uniquely placed to maximize minority outreach; the University serves approximately 4,700 students, 94% of whom are African-American (National Center for Education Statistics, Fall 2020 data). Nestled in Chesterfield County, twenty miles south of Richmond, Virginia, the school is also within driving distance for more than 300,000 minorities. The mission statement of the University affirms that VSU is dedicated to the promotion of knowledgeable, perceptive, and humane citizens – secure in their self-awareness, equipped for personal fulfillment, sensitive to the needs and aspirations of others, and committed to assuming productive roles in a challenging and ever-changing global society. In accordance with this mission, the University is duty-bound to contribute to student proficiency in science, engineering, technology, and mathematics. Within STEM majors, in particular, is the goal of proficiency is achieved with varied course offerings, small classes, and diverse, well-educated faculty.

From its origins as a “Normal and Industrial Institute” in 1882, Virginia State has been dedicated to training future educators. The conceptual framework of VSU’s state-approved and CAEP accredited Professional Education Programs Unit is the driving force in the continuous preparation of practitioners and professional educators who are competent, caring, effective, and reflective. The elementary education program has been nationally recognized by the Association for Childhood Education International (ACEI). This organization provides standards for teacher preparation programs and promotes the education and development of children and the professional growth of educators.

3. Identify potential affiliates, partners, and describe potential sustainable funding sources:

Virginia State University is proud to identify its collaborating partners for this initiative. Attached to this document you will also find letters of support from most of these organizations. First, Richard Bland College of William and Mary and Brightpoint Community College have agreed to partner to provide experts in the field of education, STEM, and research to support the planning process and curriculum development efforts. Public school divisions collaborating with this project include Petersburg City Public Schools (Grades PreK-12), Chesterfield County Public Schools (PreK), Dinwiddie County Public Schools (PreK), and Prince George County Public Schools (PreK). The County of Chesterfield and City of Petersburg have also provided letters of support for the project. Nonprofit organizations partnering for this effort include CodeVA, National

Math + Science Initiative, Science Museum of Virginia, Virginia NBCT Network, and the Virginia Literacy Foundation. Industry partners include Amazon, Dominion Energy, and LEGO Education North America. And, several community organizations have agreed to participate as well: Communities in Schools - Petersburg, Boys & Girls Club of Metro Richmond, Peabody Academy Learning and Development Center, Peoples Advantage Federal Credit Union, Urban League of Greater Richmond, Lending Helping Hands, and the YMCA of Greater Richmond.

Potential sustainable funding sources include support from industry partners, as well as per pupil tuition received for students enrolled in the VSU Lab School (once operational). Wraparound services provided by community organizations will also assist in providing resources to maintain the lab school. YMCA of Greater Richmond is in the process of discussing how they can assist with transportation and provide additional health and physical education resources to students and families in need. The Urban League has committed to providing mentoring to students during and after school, while other community organizations have also committed to assisting with after-school programming for students, which in turn supports families who are unable to provide transportation for students outside of normal school hours.

4. Identify potential barriers to the planning process and possible ways to address them:

At this time, we are able to identify three potential barriers to the planning process and will provide possible ways to address them (Table 3).

Table 3. Potential barriers to the planning process

Potential Barriers	Explanation of Potential Barriers	Potential Solution to Barriers
1. Teacher learning/ professional development	In-service teachers may be reluctant to participate in or implement a curriculum redesign	Provide teachers with specific, ongoing, and engaging learning opportunities, supporting them through the process to effectively implement innovative strategies for student learning and engagement. Allow teachers to have a voice in the professional development planning process.
2. Student Interest	Students may be uninterested in STEM-related curriculum, or learning computer	Identify opportunities for students to connect to content in a variety of ways, making it accessible to all levels of learners. Opportunities for

	science-related skills. They may be hesitant to attempt advanced coursework such as advanced placement or dual enrollment.	engagement could focus on including students in the curriculum planning process (at certain levels), providing after-school and summer opportunities, job shadowing, internships, ways to engage with industry partners, and hands-on, authentic learning experiences.
3. Content/curriculum delivery and assessment	According to Ejiwale (2013), “a typical elementary school teacher that has minimal preparation in any STEM field tends to lack confidence in his/her knowledge of the subject and may bequeath this anxiety to students” (p. 65).	Provide sustainable teacher learning opportunities to deepen STEM knowledge, provide mentors from STEM fields, provide opportunities for teachers to engage with industry partners and nonprofit organizations to broaden their understanding of STEM and how STEM-enhanced education can benefit all learners.

## I. BUDGET OF DIRECT COSTS (WITH \$200,000 MAXIMUM)

1. Complete the budget table below outlining the financial plan of how the Planning Grant will be used in the effort to establish a Lab School. The Planning Grant period and use of funds may not exceed 12 months from the date of award.
2. Only include direct operating costs. Indirect costs and capital outlay costs are not allowed. Include a description of expenses that explains appropriateness of expenses based on the category descriptions shown below.
3. All expenses must be directly related to the proposed Planning Grant activities. Applicants are not guaranteed the requested award amount and any award may be proportionally adjusted according to application’s weighted Planning Grant Application Evaluation Rubric score and to reflect only those expenditures that are designated as permissible.
4. **Note: Any unspent Planning Grant funds remaining at the end of the grant term must be returned by the recipient to the Department.**

CATEGORY	DESCRIPTION OF EXPENSES	FUNDING REQUESTED
<b>1000 – Personal Services</b>	<ul style="list-style-type: none"> <li>STEM faculty to serve as advisors to the curriculum writing process (4 advisors at \$1,000 each for work occurring during the fall and spring: \$4,000 total)</li> <li>Dr. Tracy Walker, Associate Professor in Educational Leadership, to provide support services to the planning process, including submission of reports, and to lead the full implementation grant application process. (\$7,500, which accounts for 8.61% of her 10-month salary)</li> <li>Dr. Kristal Clemons, Associate Professor in Educational Leadership, to lead workgroups to the planning process, including school and community engagement, and co-write the implementation grant application. (\$7,500, which accounts for 9.55% of her 10-month salary)</li> <li>Dr. Alishea Rowley, LMHC, Associate Professor in Counselor Education, to lead workgroups to the planning process, including school and community engagement, integrating social emotional wellness into the curriculum, and to co-write the implementation grant application. (\$7,500, which accounts for 10.71% of her annual salary)</li> <li>Dr. Michael Rainey, to provide administrative support for the planning project (\$4,000 )</li> </ul>	\$30,500
<b>2000 – Employee Benefits</b>	<ul style="list-style-type: none"> <li>Fringe for STEM faculty at 7.65% (\$306)</li> <li>Fringe for Dr. Tracy Walker at 7.65% (\$574)</li> <li>Fringe for Dr. Kristal Clemons at 7.65% (\$574)</li> <li>Fringe for Dr. Alishea Rowley at 7.65% (\$574)</li> <li>Fringe for Dr. Michael Rainey at 7.65% (\$306)</li> </ul>	\$2,334
<b>3000 – Purchased/Contractual Services</b>	<ul style="list-style-type: none"> <li>Professional development for administrators and teachers in creating personalized, student-centered classrooms including strategic visioning, curriculum alignment, and implementation of student-centered learning. (\$5,000 for elementary, middle, and high school staff: \$15,000 total)</li> <li>Professional development support for instructional staff to pursue national board certification (Virginia NBCT Network) (\$15,000)</li> </ul>	\$149,000

CATEGORY	DESCRIPTION OF EXPENSES	FUNDING REQUESTED
	<ul style="list-style-type: none"> <li>Curriculum writing by Petersburg instructors and instructional specialists to align STEM programming with the Virginia Standards of Learning. (\$5,000/elementary, middle and high school for grades PreK-5, and 6-12: \$35,000 total)</li> <li>Curriculum planning to meet objectives of Virginia Literacy Act, and to align initiatives for student engagement through LEGO, Amazon (cloud computing), and Dominion Energy (MInternship). (\$6,000)</li> <li>Kenedria Thurman, Early Childhood Specialist, to serve as a consultant and curriculum development expert for early childhood education and lead the PreK/Early Childhood Education workgroup leader. Dr. Thurman will also assist in writing the full implementation grant application. (\$6,500)</li> <li>Additional contractual services will be provided to non-profit partners to serve on the planning team and engage the community to support the initiative. (4 partners at \$7,000 each: \$28,000 total)</li> <li>Meals provided to support attendance at family engagement activities (\$3,500)</li> <li>CodeVA as a collaborative planning partner for incorporating computer science education into the PreK-12 curriculum. (\$25,000)</li> <li>Curriculum writing supervision, dual enrollment preparation, and connections to workforce for Richard Bland College of William and Mary and Brightpoint Community College (\$7,500 each; total \$15,000)</li> </ul>	
<b>4000 – Internal Services</b>		\$0
<b>5000 – Other Services</b>		\$0
<b>6000 – Materials and Supplies</b>	<ul style="list-style-type: none"> <li>Miscellaneous - supplies, copying, postage, displays. (\$2,500 total)</li> </ul>	\$18,000

CATEGORY	DESCRIPTION OF EXPENSES	FUNDING REQUESTED
	<ul style="list-style-type: none"> <li>• Marketing and paid placement advertising, ads, flyers, publications, etc. for community engagement activities. (\$6,000 total)</li> <li>• Materials to support professional development and curriculum writing. (\$7,000 total)</li> <li>• Food items purchased for snacks or breaks during professional development and curriculum writing meetings. (\$2,500)</li> </ul>	
<b>Total</b>		<b>\$199,834</b>

**\* Total cannot exceed \$200,000 with additional funding considered at the discretion of the Department on a case-by-case basis and in accordance with available funds.**

Please visit the [Virginia Department of Education OMEGA object codes universal guidelines](#) for a complete description of the budget categories.



## APPENDIX: PLANNING GRANT APPLICATION EVALUATION RUBRIC

For the applicant's information, the following will be used as the Planning Grant Application Evaluation Rubric for this application. Applicant does not need to complete this section.

AREA OF CONSIDERATION	DESCRIPTION	POINTS AVAILABLE
Targeted Student Population(s) and Relevant Research	Application proposes intention to serve at-risk students and/or offer a new, innovative model of instruction grounded in evidence-based practices to improve student academic proficiency, mastery, college and career readiness, and long-term outcomes.	30
Clarity of Program Description Goal, and Timeline	The program description and goal are clear and attainable. Indication of programmatic, operational, and infrastructural capacity to advance an application to launch a Lab School program, as well as launch a Lab School no later than the 2024-2025 school year. Additional preference will be given to applicants with an earlier Lab School launch timeline.	20
Sustainability	Evidence of institutional commitment to the viability of a Lab School in a manner that promotes quality, innovation, program results, and sustainability.	20
Collaboration	Evidence of engagement and collaboration with stakeholders, including local school divisions, community-based organizations, employers, teachers and parents.	15
Regional and Applicant Diversity	Evidence of diversity of location, with the goal of Lab Schools in each Superintendent region. For applicant diversity, preference will be given to new applicants in the event a concurrent applicant has previously received a Planning Grant during the current application period.	15